

Aqueous coating agent, preparation of the same and use thereof for multi-layered lacquering

Description of Technology: The invention provides aqueous coating agents which contain aqueous binder dispersions based on hybrid polymers which are prepared by radical copolymerisation of olefinically unsaturated monomers in the presence of aqueous dispersed polyurethane resins which contain siloxane bridges and/or silanol groups but do not contain double bonds. It also provides a process for preparing the aqueous coating agents and a process for multi-layer finishing using these coating agents, in particular as a water-based base-coat lacquer in a process for preparing decorative multi-layer finishes of the water-based base-coat lacquer/clear lacquer type.

Patent Listing:

1. **US Patent No.** 6,437,041, Issued on August 20, 2002, “Aqueous coating agent, preparation of the same and use thereof for multi-layered lacquering”

<http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HTO&F=&p=1&u=%2Fnetacgi%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=6,437,041.PN.&OS=PN/6,437,041&RS=PN/6,437,041>

Market Potential: The invention provides aqueous coating agents containing an aqueous binder dispersion and also optionally one or more organic solvents, cross-linking agents, pigments, fillers, conventional lacquer additives and/or one or more further binders, which are characterised in that the aqueous binder dispersion is based on polyurethane/polymer hybrid polymers with a ratio by weight of polyurethane fraction to polymer fraction of 0.1:1 to 50:1, wherein the polyurethane fraction of the polyurethane/polymer hybrid polymer does not contain any olefinic double bonds and has a hydroxyl value of 0 to 150, with respect to the solid resin, wherein hydroxyl groups bonded to silicon do not enter into the calculation for the OH value, and an acid value of 1.5 to 60 mg KOH/g, with respect to solid resin, and a concentration of 0.5 to 300 mmol of silicon per 100 g of solid resin in the form of siloxane bridges (--Si--O--Si--) incorporated into the polyurethane fraction and/or in the form of silanol groups bonded to the polyurethane fraction. The polyurethane/polymer hybrid polymers are obtainable by polymerisation of olefinically unsaturated monomers in the presence of polyurethane prepolymers which do not contain olefinic double bonds.

Benefits:

- Prepares aqueous coating agents
- Prepares a process for multi-layer finishing

Applications:

- Decorative multi-layer finishes of the water-based base-coat lacquer/clear lacquer type

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